What is claimed is:

1. Process for determining the alignment of a cylindrical body with respect to a reference direction by means of a measurement device having a first attachment area and a second attachment area and a position measurement probe calibrated to the reference direction and which is capable of detecting a first angle of rotation of the probe around a first axis which is fixed in space and capable of detecting a second angle of rotation of the probe around a second axis fixed in space, comprising the steps of:

performing a first measurement in which the probe is located at the first attachment area and the second attachment area on a peripheral surface of the body, wherein the first attachment area is a first measurement position which is held stationary with respect to the peripheral surface of the body and wherein, in the second attachment area the probe is angularly displaced relative to the first attachment area into contact with the peripheral surface of the body;

detecting, during the angular displacemetn, the characteristic of the first angle and the second angle of rotation;

performing a second measurement in which the probe is attached with the first attachment area and the second attachment area on another part of the peripheral surface of the body offset in a peripheral direction from the area of the body of the first measurement, wherein the first attachment area is held stationary with respect to the peripheral surface of the body and wherein in the second attachment area the probe is angularly displaced relative to the first attachment area into contact with the peripheral surface of the body,

detecting, during the angular displacement, the characteristic of the first angle and the second angle of rotation,

performing a comparison of the characteristic of the first angle and second angle of rotation from the first measurement with the characteristic of the first angle and second angle of rotation from the second measurement, and

determining the alignment of the body, as result of the comparison, with respect to the reference direction.

2. Process as claimed in claim 1, wherein the first axis is perpendicular to the second axis.

3. Process as claimed in claim 2, wherein, when the probe is aligned horizontally relative to the body, the first axis and the second axis are positioned such that the first angle of rotation is the elevation angle and the second angle of rotation is the azimuth angle.

4. Process as claimed in claim 1, wherein, during the comparison of the first and the second measurement, either the first angle of rotation is plotted as a function of the second angle of rotation or the second angle of rotation is plotted as a function of the first angle of rotation, and the deviation of the alignment of the body from the reference direction is determined from the intersection point of the plotted curve of the first measurement with the corresponding plotted curve of the second measurement.

5. Process as claimed in claim 4, wherein one compensation function at a time is determined from the detected values of the first and the second measurement by curve matching such that the deviation of the alignment of the body from the reference direction is determined from the intersection point of the compensation functions.

6. Process as claimed in claim 1, wherein the first measurement and the second measurement is detected along the entire angular displacement of the second attachment area with respect to the first attachment area and wherein the angular displacement is at least 10 degrees.

7. Process as claimed in claim 1, wherein, during the second measurement, the measurement probe moves from an initial position to an end position, and further, the initial position and end position of the probe during the second measurement is essentially parallel to a corresponding initial position and end position of the probe during the first measurement.

8. Process as claimed in claim 1, wherein during the first measurement and the second measurement, the probe is essentially aligned such that a connecting line between the first attachment area and the second attachment area is aligned essentially parallel with a lengthwise axis of the body.

9. Process as claimed in claim 1, wherein the second attachment area is in the form of a tip which is adapted to be manually pushed manually over the peripheral surface of the body and in contact with the peripheral surface of the body during the first measurement and second measurement.

10. Process as claimed in claim 1, wherein the second attachment area is in the form of a wheel which is adapted to be rotationally supported with respect to the probe and is tangential, with respect to the angular displacement motion, to the second attachment area relative to the first attachment area,

and wherein, during the first measurement and the second measurement, the wheel is manually rolled on the peripheral surface of the body.

11. Process as claimed in claim 1, wherein the second attachment area is in form of a knife edge which is tangential, with respect to the swiveling motion, to the second attachment area relative to the first attachment area, and

wherein the knife edge, during the first measurement and second measurement, is manually pushed over the peripheral surface of the body and in contact with the peripheral surface of the body.

12. Process as claimed in claim 11, wherein the knife edge is of a flat or a polygon shape.

13. Process as claimed in claim 11, wherein the cutting edge is curved in either a circular or circular arc shape.

14. Process as claimed in claim 1, further comprising detecting, utilizing a detector means, when the second attachment area is in contact with the peripheral surface of the body such that measured values are recorded for the characteristic of the first angle of rotation and the second angle of rotation.

15. Process as claimed in claim 14, wherein the detector means detects the pressure force of the second attachment area on the peripheral surface of the body.

16. Process as claimed in claim 14, wherein the detector means detects whether there is electrical contact imparted from the peripheral surface of the cylindrical body between the first attachment area and the second attachment area.

17. Process as claimed in claim 1, wherein the axis of the angular displacement motion in the first measurement and the axis of the angular displacement motion in the second measurement are essentially parallel to one another.

18. Measurement device for determining the alignment of a cylindrical body with respect to a reference direction comprising:

a position measurement probe adapted to be calibrated relative to the reference direction and to detect a first angle of rotation of the probe around a first axis which is fixed in space and to detect a second angle of rotation of the probe around a second axis which is fixed in space, the probe including a first attachment area and a second attachment area for positioning of the probe on a peripheral surface of the body; and

an evaluation unit,

wherein the position measurement probe is adapted to be movable after a first measurement from a first measurement position to a second measurement position displaced from the first measurement position for performing a second measurement,

wherein the first attachment area is adapted to be fixedly attached to the peripheral surface of the body during each measurement, while the second attachment area is adapted to be angularly displaced in contact with the peripheral surface of the body with respect to the first attachment area, and

wherein the evaluation unit is adapted, during the first and the second measurement, to detect a characteristic of the first angle of rotation and the second angle of rotation during each measurement, perform a comparison of the characteristic of the first angle and second angle of rotation from the first measurement with characteristic of the first angle and second angle of

rotation from the second measurement, and determine the alignment of the body with respect to the reference direction.

19. Device as claimed in claim 18, wherein the first attachment area has a foot that is detachably mountable on the peripheral surface of the body and can be swung with respect to the probe around two axes which are perpendicular to one another.

20. Device as claimed in claim 19, wherein a first axis of the two axes of the foot is perpendicular to the peripheral surface of the body and a second axis of the two axes of the foot is perpendicular to a connecting line between the first attachment area and the second attachment area.

21. Device as claimed in claim 20, wherein the alignment of the first axis of the foot is variable with respect to the foot such that the first axis is essentially fixed in space and is parallel to the second axis which is also fixed in space regardless of the position of the foot on the peripheral surface of the body

22. Device as claimed in claim 19, wherein the foot comprises a magnet.

23. Device as claimed in claim 18, wherein the probe includes a mechanical or optical gyroscope for each axis of angle of rotation.